

Translation

PATENT COOPERATION TREATY

PCT/FR2003/000972



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

508,990  
2/4/04

Applicant's or agent's file reference TSF1577/1+2	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/FR2003/000972	International filing date (day/month/year) 27 mars 2003 (27.03.2003)	Priority date (day/month/year) 27 mars 2002 (27.03.2002)
International Patent Classification (IPC) or national classification and IPC A61B 7/02, 8/06		
Applicant BINDEFELD, Hervé		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet.  <input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of <u>1</u> sheets.
3. This report contains indications relating to the following items:  I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 10 octobre 2003 (10.10.2003)	Date of completion of this report 04 February 2004 (04.02.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

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## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☒ the description:  
 pages 1-16, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
 pages 2-41, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement under Article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages 1, filed with the letter of 09 December 2003 (09.12.2003)
- ☒ the drawings:  
 pages 1/12-12/12, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

### 5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1-41	YES
	Claims		NO
Inventive step (IS)	Claims	1-41	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-41	YES
	Claims		NO

### 2. Citations and explanations

#### 1. Reference is made to the following documents:

D1: US-5964709

D2: US-5960089

#### 2. Novelty

##### 2.1. Document D2 describes (references between parentheses apply to said document):

A medical diagnostic and screening apparatus based on the dual detection of Doppler and stethoscope signals, comprising a sound transmission coupling tube (28, 31) connected, at one end thereof, to a housing (24) forming at least partially an acoustic bell (26) and, at the other end thereof, to at least one earpiece (32) for listening to a stethoscope signal from said bell, characterised in that said housing is coupled to one or more ultrasound probes (76, 84) adapted for providing the convergence of the received ultrasound and stethoscope signals relative to each other and linked to a processing transducer circuit (figure 7) capable of providing, from a Doppler signal (column 5, lines 17-22), an

audio signal via the coupling of said processing circuit with a loudspeaker (55) connected to the bell to allow stethoscope-type listening, and a video signal via the coupling of said processing circuit with display means (98) to provide visual information.

The subject matter of claim 1 differs from that of document D1 in that the acoustic bell is provided with a diaphragm and in that the apparatus can carry out said dual detection simultaneously.

Therefore, the claim meets the requirements of PCT Article 33(2).

2.2. The dependent claims also comply with the criterion of novelty.

3. Inventive step

3.1. Providing a diaphragm on the acoustic bell is standard practice for a person skilled in the art.

The problem to be solved by the present invention can be considered to be that of enhancing detection consistency in order to obtain a highly reliable diagnosis.

The solution proposed in claim 1 of the present application is considered to be inventive (PCT Article 33(3)), since it is not provided by the cited prior art. It is clear that D2, which has two different bells for the two types of detection, does not allow simultaneous dual detection. D1 (figure 38; column 33, line 47 to column 34, line 13) describes an ultrasound/Doppler stethoscope which

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can also provide standard acoustic signals, but this document does not give any details regarding the construction of said apparatus.

Therefore, the claim meets the requirements of PCT Article 33(3).

3.2. The dependent claims also comply with the requirements of inventive step.

4. Industrial applicability

All the claims are considered industrially applicable and therefore meet the requirements of PCT Article 33(4).